

Tronox Joint Agency Meeting

Thursday October 26, 2017



FY2018 Proposed Projects



Project Approval Process

1st Step

Solicitation of new and continuing projects.

2nd Step

Collaboration on proposed project approach and scope.

Continue solicitation of projects.

3rd Step

Present list of proposed projects and estimated costs.

4th Step

Finalize proposed projects for the funding document.

Communication and Collaboration



Region 9 Tronox FY2018 Proposed Budgets Previously Approved Ongoing Projects*

Project I:	EE/CA for the Quivira Mine Site in the Coyote Canyon and Standing Rock Chapters of the Navajo Nation and McKinley County, NM	~\$280,000
Project II:	Cove Community Air Study	~\$350,000
Project III:	Cove Livestock Study	~\$500,000
Project IV:	Tronox Emergency Responses/Time Critical Actions	~\$500,000
Project V:	Cove Mesa V Adit Closure	~\$100,000
Project VI:	Tronox Data Management NRestore	~\$300,000
Project VII:	Northern Agency Tronox Removal Site Evaluations	~\$1,800,000
Project VIII:	Cove Phase II Mine Assess Road Design/Improvement	~\$2,000,000
Project IX:	NAUM – Navajo Nation Program Management Plan	~\$150,000

Region 9 Proposed Contracting Budget for Ongoing Projects FY2018 = \$5,980,000

*Additional Detail is provided on the project specific slides



Region 9 – Project I Ongoing

Project Title: EE/CA for the Quivira Mine Site in the Coyote Canyon and Standing Rock Chapters of the Navajo Nation and McKinley County, NM

Project Objective: The objective of this project is to complete the EE/CA to evaluate the response options at this site to abate the threats to the public health and the environment to the benefit of the Navajo Nation and the citizens of the State of New Mexico. Activities include:

- Finalizing the Draft EE/CA after the list of alternatives is approved
 - This will include coordinating a joint review with R6 for consistent language and format between R6 and R9 EE/CAs
- Providing support for the National Remedy Review Board (NRRB) package and meeting
- Responding to comments from NNEPA and the State of NM and updating the Risk Assessment and other technical and policy matters as necessary
- Providing factsheets, handouts and presentation materials for public meetings
- Responding to public comments

Project Duration: Project is Estimated to be Complete in FY2018.

Project Contracting Budget: \$280,000



Region 9 – Project II Ongoing

Project Title: Cove Community Air Study

Project Objective: The objective is to conduct a study of air quality in the Cove community to obtain baseline data about air quality prior to clean-up activities and to address community concerns related to exposure of contaminants associated with abandoned uranium mines.

The investigation will consist of a 9 month sampling event beginning in March of 2018. We will collect samples for analysis of radionuclides, metals of concern associated with abandoned uranium mines and PM2.5 analysis at 3 to 4 locations in the Cove community and in a reference location approximately 10 miles outside of the Cove community. Additionally, a weather station will be placed at the Cove Chapter House to collect meteorological data for the study. The data collected will be summarized in a risk assessment to be used in the Cove Remedial Investigations.

Project Duration: Project is Estimated to be Complete in FY2018.

Project Contracting Budget: \$350,000



Region 9 – Project III Ongoing

Project Title: Cove Livestock Study

Project Objective: Conversations with the Cove Chapter community have revealed concerns by the people about whether the meat from the livestock they graze, water, and raise within the community is safe for consumption. There are some 42 abandoned uranium mines within Cove Chapter, the waste from which is spread around areas that may be used for grazing. Also, testing of the water in the Cove wash, which is a livestock watering source, has revealed levels of uranium above the maximum contaminant level (MCL) for drinking water. Although there are no promulgated livestock levels for water, elevated MCLs could be cause for concern for livestock. As a result of these concerns, EPA is suggesting a livestock study for herds grazing within the Cove Chapter and the Lukachukai Mountains.

The proposal is to analyze tissues from sheep, cattle and goats that are grazed within the subject area. The animals would be slaughtered according to traditional Navajo custom by Navajo people, and various organs and parts of the animals will be separated, bagged, and sent to a laboratory for sampling. There, the samples will be dried and undergo radiochemical analyses for U-238, U-234, Ra-226, Th-230, Pb-210, and Po-210, as well as the full suite of metals. At the very least, bone, muscle, liver, and kidney tissues will be analyzed, since previous studies have shown the highest accumulation of radiological materials in the liver and kidney, but muscle tissue and bone marrow are also commonly consumed.

Dine College will be the lead for the study under a cooperative agreement with EPA Region 9, and will collaborate with UNM and NAU to accomplish this work.

Project Duration: Project is estimated to extend through FY2019.

Project Contracting Budget: \$500,000



Region 9 – Project IV Ongoing

Project Title: Tronox Emergency Responses/Time Critical Actions

Project Objective: This project is a place holder for potential Tronox Emergency Responses/Time Critical Actions. Project descriptions and funding will be documented through a US EPA Action Memo.

Project Duration: Project duration is through FY2018.

Project Contracting Budget: \$500,000



Region 9 – Project V Ongoing

Project Title: Cove Mesa V Adit Closure

Project Objective: The objective of this project is to construct a gate to prevent access to the Mesa V Adit. US EPA will provide funding to AML through a grant to complete this project.

Project Duration: Project is estimated to extend through FY2018.

Project Budget: \$100,000



Region 9 – Project VI Ongoing

Project Title: Tronox Data Management NRestore

Project Objective: Continuing the development and population of the Tronox database. Activities will include:

- Weston is proceeding with database fixes
- Additional development – i.e. SSID tracking component
- Information Security Plan
- Database code and explanation
- 3 working sessions Dallas, Window Rock, and San Francisco
- Weston close-out tasks for transition
- RAES transition

Project Duration: Project is estimated to extend through FY2018.

Project Contracting Budget: \$300,000



Region 9 – Project VII Ongoing

Project Title: Northern Agency Tronox Removal Site Evaluations

Project Objective: The objective of this project is to perform Removal Site Evaluations (RSEs) at the following Tronox Abandoned Uranium Mines and Mine Areas:

- 35 Tronox Abandoned Uranium Mines
- 19 Tronox Abandoned Uranium Mines
- 21 Burial Cell associated with the 35 Northern Agency AUMs
- 21 Non-AUM Targets

The following work/deliverables will be performed:

- Data Gap Analysis and RSE Sampling Strategy Plan
- Site-Specific Health and Safety Plan (Attachment to the RSE Sampling Strategy Plan)
- Site Clearance Studies
- Baseline Studies field work
- Site Characterization and Assessment field work

Project Duration: Project is estimated to extend through FY2018.

Project Contracting Budget: \$1,800,000



Region 9 – Project VIII Ongoing

Project Title: Cove Phase II Mine Assess Road Design/Improvement

Project Objective: The objective of this project is to provide an interim design and bid package for the access improvements to MESA V Cove AZ, develop and implement a systematic method for assessing and surveying roads to 32 abandoned uranium mine sites and providing a design and bid package for improvements to the 32 mines areas.

Project Duration: Project is estimated to extend through FY2019.

Project Contracting Budget: \$2,000,000



Region 9 – Project IV Ongoing

Project Title: Navajo Nation Program Management Plan

Project Objective: The objective of this project is to produce a Program Management Plan for the Navajo Nation Environmental Protection Agency Abandoned Uranium Mines Program. Activities will include:

- Project Coordination and Kick-Off Meeting
- Fact Finding and Preliminary Analysis
- On-Site Interviews/Information Collection
- Program Management Plan
- Workforce Needs Assessment Plan
- Acquisition Plan
- Records Management Plan
- Final Submission

Project Duration: Project is estimated to extend through FY2018.

Project Contracting Budget: \$150,000



Region 9 Tronox FY2018 Proposed Budgets

New Projects*

Project I:	Non-time Critical Data Gap Removal Site Evaluation (RSE) and EE/CA on Section 32/33 AUM Site	~\$650,000**
Project II:	Cove Wash Remedial Investigation	~\$200,000
Project III:	Interim Action at Mesa II Reclamation Cell	~\$500,000
Project IV:	Waste Reduction Investigation at Existing Mines	~\$150,000
Project V:	Cooperative Agreements and Grants for Navajo Nation and Training/Education Institutions (NSP, AML, Dine' College, etc.)	~\$1,200,000

Region 9 Proposed Contracting Budget for New Projects FY2018 = \$2,700,000

*Additional Detail is provided on the project specific slides

**R6/R9 Joint Action



Region 9 – Project I New

Project Title: Non-time Critical Data Gap Removal Site Evaluation (RSE) and EE/CA on Section 32/33 AUM Site

Project Objective: The objective of this project is to define the extent of excess radiological contamination, characterize the actual or potential threats to the public health and the environment posed by the 2 former Cobb Nuclear mines (Section 32,33) that are listed in the Tronox Settlement as well as to evaluate the remediation options necessary to abate the threats to the public health and the environment to the benefit of the Navajo Nation and the citizens of the State of New Mexico.

The Section 32 AUM Site and Section 33 AUM Site are related from the standpoint that there is visible comingled waste associated with the same mining operation located on both sections along the section boundary. Section 32 AUM Site, Casamero Lake Chapter, Navajo Nation is currently used as a residential property. The property currently has four residential structures. There are children that reside on the property. A partial assessment has already been conducted around the residential structures on this section. Because of the partial assessment, a time critical removal action was conducted on this property focusing around the residential areas; the removal was an interim action and consisted of consolidating and covering waste on site. Section 33 AUM Site, McKinley County, NM is currently used as grazing and ranch land. An arroyo currently flows from the Section 33 AUM Site to the Section 32 AUM Site.

Project Duration: Project is Estimated to be Complete in FY2018.

Project Contracting Budget: \$650,000



Region 9 – Project II New

Project Title: Cove Wash Remedial Investigation

Purpose: A FY17 project, the Cove Conceptual Site Model, identifies the Cove Wash as an Investigation Area within Cove. Additionally, four seasons of sampling within the Cove Wash show elevated levels of uranium and radium. A remedial investigation is needed to characterize the nature and extent of contamination as well as conduct human health and ecological risk assessments, which will help inform risk-based decisions on how to address the contamination. This project is to draft an RI work plan for the Cove Wash.

The RI work plan will determine whether any additional sampling of the Cove Wash is required for a nature and extent determination or for human health or ecological risk assessments to be completed.

Project Duration: Project is Estimated to be Complete in FY2019.

Project Contracting Budget: \$200,000



Region 9 – Project III New

Project Title: Interim Action at Mesa II Reclamation Cell

Purpose: Surface water sampling downstream of Mesa II resulted in the highest uranium levels in all of Cove Wash (up to 2000 ug/L). The Mesa II reclamation cell is experiencing heavy erosion, which is contributing to the elevated levels downstream. Although there are other sources contributing to the uranium levels, an interim action to reduce the reclamation cell erosion is needed and could be accomplished until a final remedy is decided upon for the entirety of Mesa II.

Project Duration: Project is Estimated to be Complete in FY2018.

Project Contracting Budget: \$500,000



Region 9 – Project IV New

Project Title: Waste Reduction Investigation at Existing Mines

Purpose: In discussions regarding options for remedies at Cove, putting waste rock back into the mines has been brought up as an option that should be considered. However, this is an option that would require research to decide if and how it could be done. This option poses an engineering challenge. The purpose of this project would be to engage various mining experts to determine the feasibility of this option in Cove. The deliverable will be a technical memorandum addressing issues and considerations when putting waste back in the mines, as well as a proposal of engineering options for such an endeavor. Additionally, recommendations for the design of a treatability study should be included.

Project Duration: Project is Estimated to be Complete in FY2018.

Project Contracting Budget: \$150,000



Region 9 – Project V New

Project Title: Cooperative Agreements and Grants for Navajo Nation and Training/Education Institutions (NSP, AML, Dine' College, etc.)

Purpose: The purpose of this project is to fund Cooperative Agreements and Grants for Navajo Nation and Training/Education Institutions. The details of the project will be developed as a part of the workplans.

Project Duration: Project is Estimated to be Complete in FY2018.

Project Contracting Budget: \$1,200,000



Region 6 Tronox FY2018 Proposed Budgets

New Projects*

Project I: West GSA – Section 10 RSE Completion/Draft EE/CA	~\$100,000
Project II: West GSA – Section 22/24, Section 30W) RSE and EE/CA	No Additional Funding
Project III: East GSA – Section 35/36 RSE and EE/CA	No Additional Funding
Project IV: Central GSA – Section 17/19/30 & 33 (14N,9W) RSE and EE/CA	No Additional Funding
Project V: Groundwater Investigation (Phase I & II)	No Additional Funding

Region 6 Proposed Contracting Budgets for New Projects FY2018 = \$100,000

*Additional Detail is provided on the project specific slides



Region 6 – Project I New

Project Title: West GSA – Section 10 RSE Completion/Draft EE/CA

Purpose: The purpose of this project is to use data collected during the RSE phase, identify potential alternatives that will be protective of human health and the environment through the EE/CA development process. For each potential alternative, effectiveness, implementability, and cost will be evaluated. The common goals developed during the Tronox Stakeholder Meetings will also be reviewed and evaluated.

Project Duration: Project is Estimated to be Complete in FY2018.

Project Contracting Budget: \$100,000

